



Dr. Bernhard Mittermaler

Web of Science / Web of Knowledge

A unified information solution
for a research institution

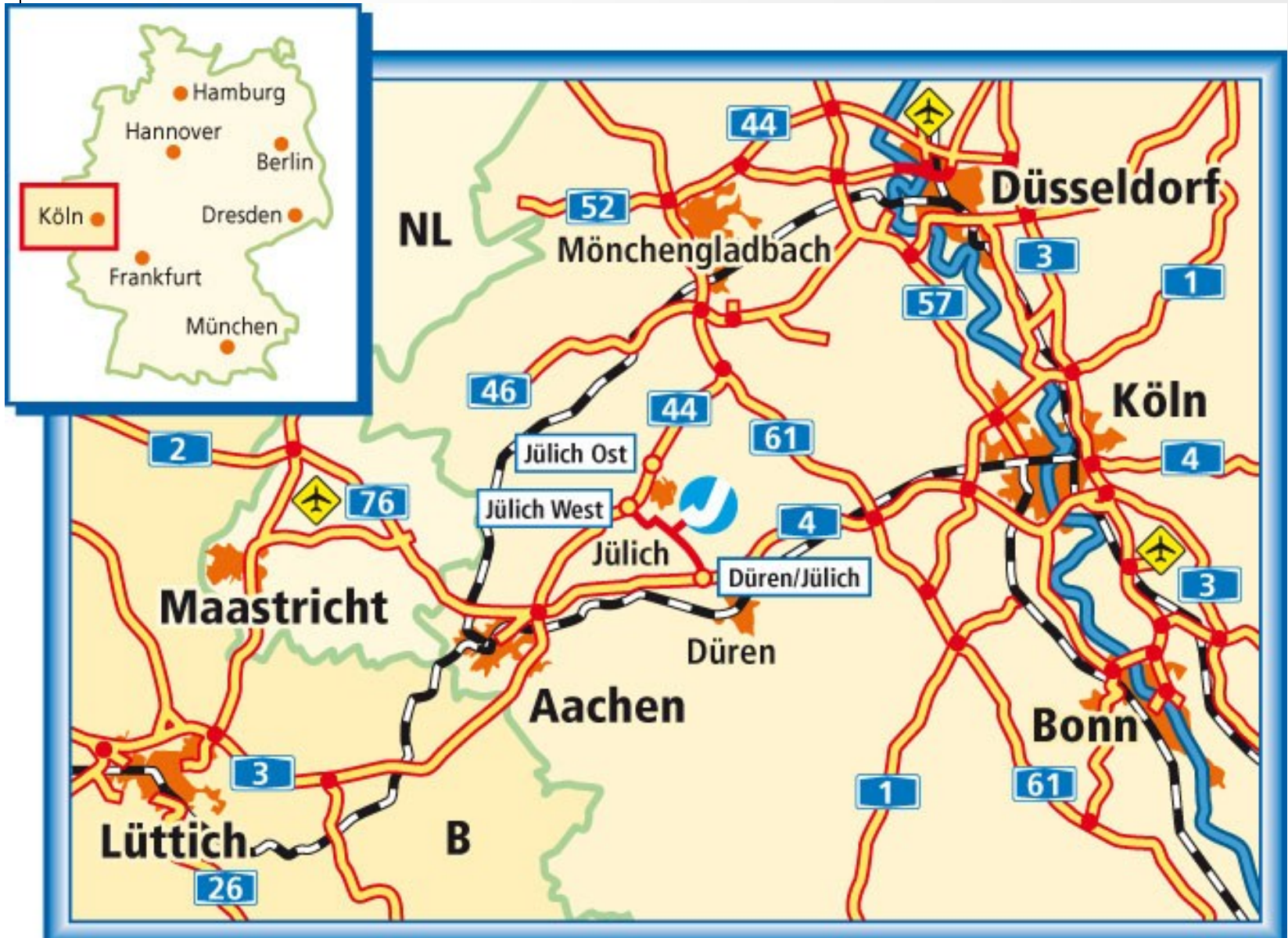
scientific research



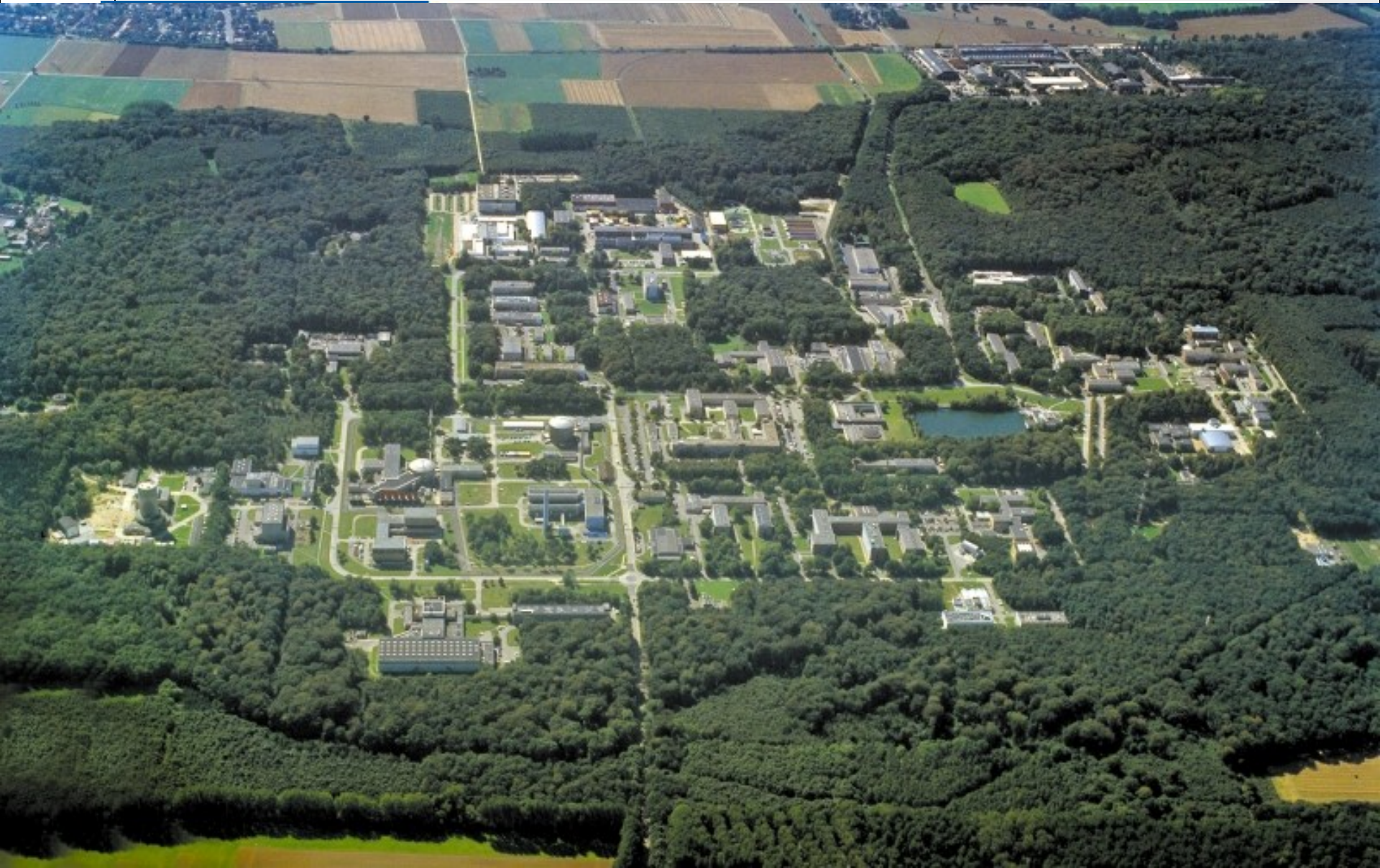
evaluation



Research Centre Jülich, Germany



Research Centre Jülich, Germany





Research Centre Jülich, Germany

- 4400 staff members
- 1300 scientists
- 2.2 km²
- largest multidisciplinary research institution in Europe



Research Areas (Selection)

- Atmospheric chemistry
- Biotechnology
- Fuel cells
- Interaction soil-plant-atmosphere
- Neuroscience
- Nuclear research
- Particle physics
- Solid-state research
- Supercomputing



Information Resources Management

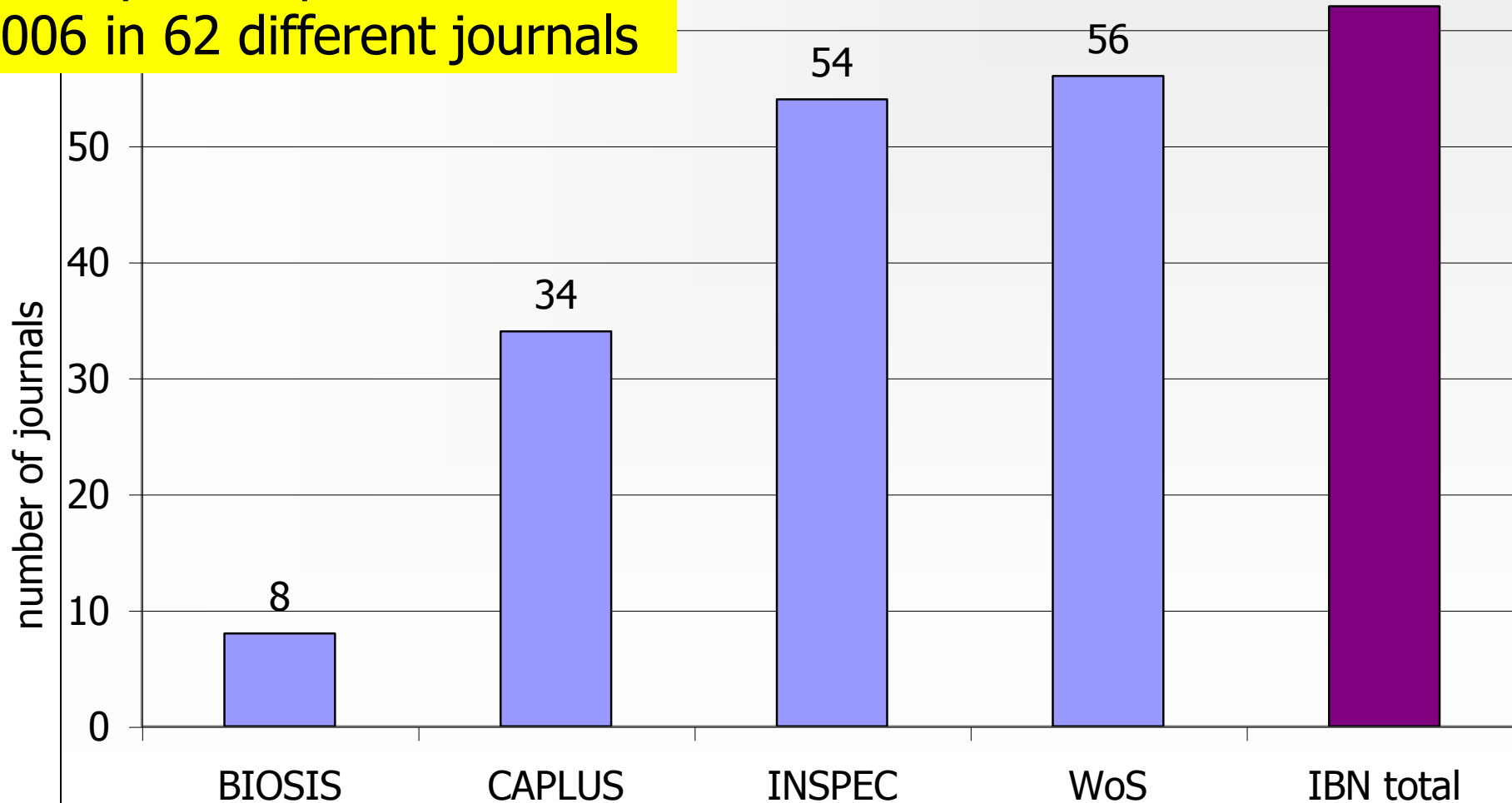
- 2.000+ subscription-based electronic journals
- 200+ databases

The Web of Science (WoS) is used more often than the other databases together.



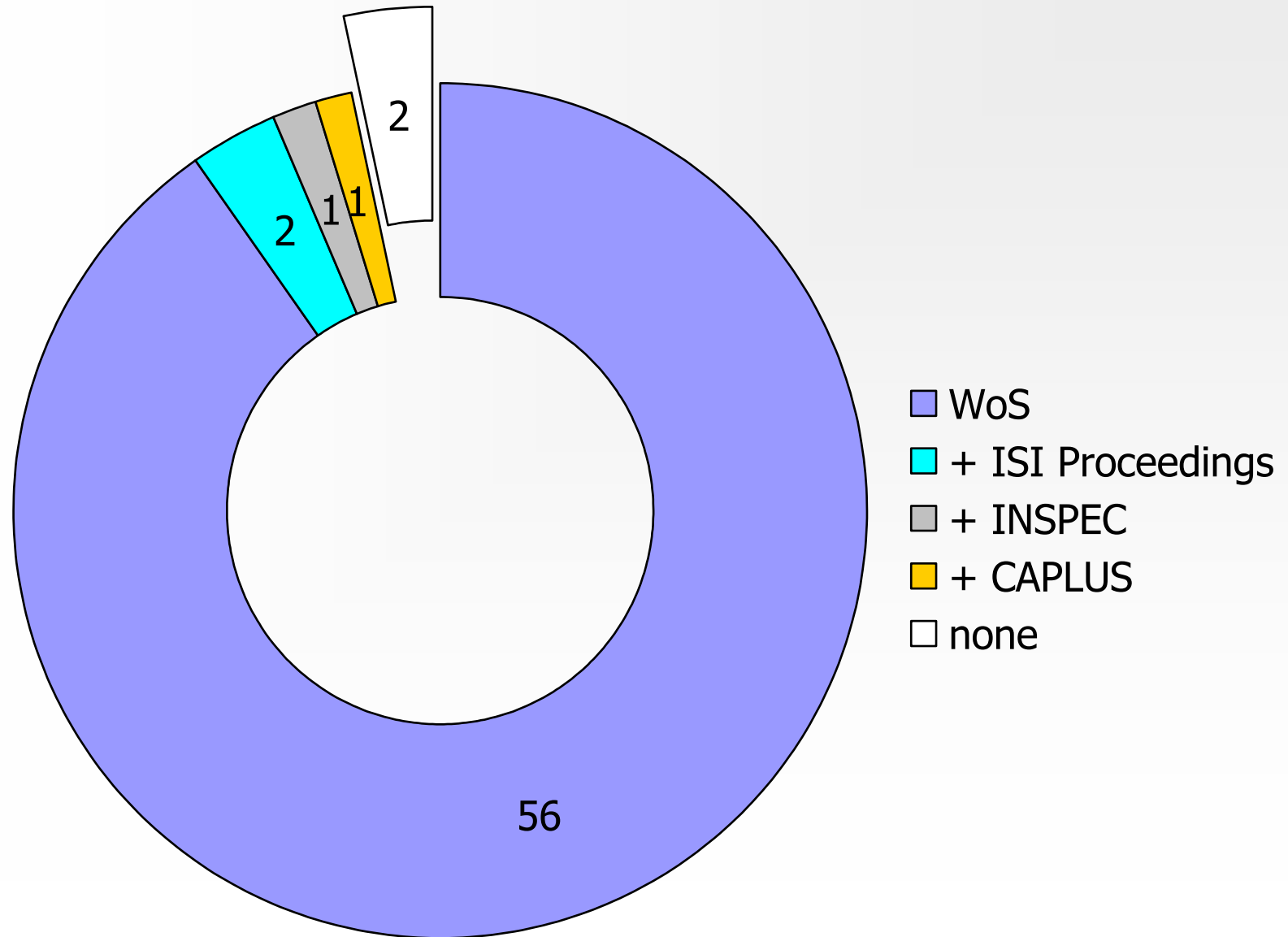
Coverage of Sources

The Institute for Bio- and Nanosystems published in 2006 in 62 different journals





Coverage of Sources



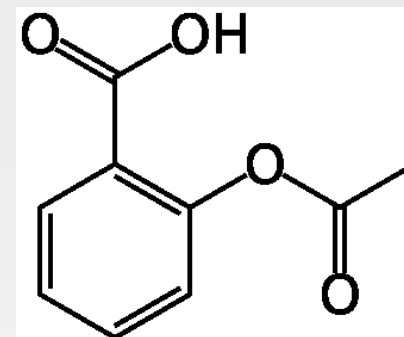


One Database Fits All?



One Database Fits All?

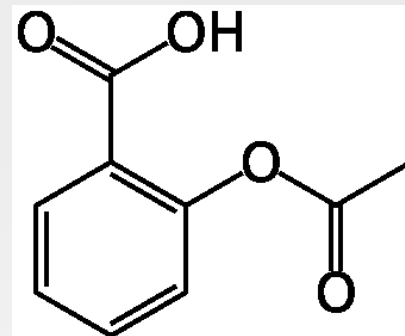
- How do I synthesize aspirin?
➔ Chemical Abstracts





One Database Fits All?

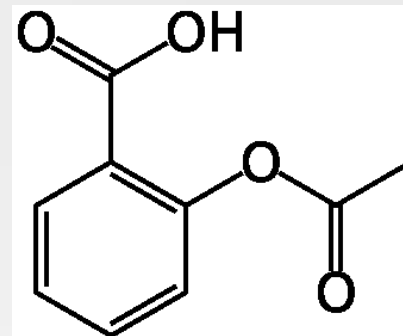
- How do I synthesize aspirin?
→ Chemical Abstracts
- I need references to power plants with more than 1500 MW
→ INSPEC





One Database Fits All?

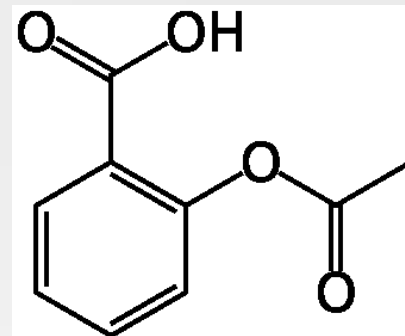
- How do I synthesize aspirin?
→ Chemical Abstracts
- I need references to power plants with more than 1500 MW
→ INSPEC
- MANY other questions → WoS





One Database Fits All?

- How do I synthesize aspirin?
→ Chemical Abstracts
- I need references to power plants with more than 1500 MW
→ INSPEC
- MANY other questions → WoS



"Most users are very complimentary of Web of Science, and do not mention using other databases aside from Google. Even the more difficult searching options in Web of Science (e.g. authors) are not seen as a problem by most users."



Importance of the Web of Science

- First choice for many users
- Others use it to make sure they have not “missed anything” in their primary database
- Used to look up people
- Used to find citations and follow citation trails



The Heir of Science Citation Index

ENHANCED MAGNETORESISTANCE IN LAYERED
MAGNETIC-STRUCTURES WITH ANTIFERROMAGNETIC
INTERLAYER EXCHANGE

Full Text

[Context Sensitive Links](#)

Print

E-mail

Add to Marked List

Save to [EndNote Web](#)

Author(s): [BINASCH G](#), [GRUNBERG P](#), [SAURENBACH F](#), [ZINN W](#)

Source: PHYSICAL REVIEW B **Volume:** 39 **Issue:** 7 **Pages:** 4828-4830 **Published:**

Times Cited: [987](#) **References:** [10](#)

Document Type: Note

Language: English



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The Heir of Science Citation Index

Search within results for

▼ Subject Areas

- ☐ PHYSICS, CONDENSED MATTER (513)
- ☐ PHYSICS, APPLIED (250)
- ☐ MATERIALS SCIENCE, MULTIDISCIPLINARY (231)
- ☐ PHYSICS, MULTIDISCIPLINARY (135)
- ☐ CHEMISTRY, PHYSICAL (45)
- [more...](#)

▼ Document Types

- ☐ ARTICLE (852)
- ☐ REVIEW (69)
- ☐ LETTER (34)
- ☐ NOTE (28)
- ☐ EDITORIAL MATERIAL (3)
- [more...](#)

► Authors

► Source Titles

► Publication Years

- ☐ 1. Title: [Resource letter STMN-1: Spin transport in magnetic nanostructures](#)
Author(s): Hathaway K, Dahlberg ED
Source: **AMERICAN JOURNAL OF PHYSICS** Volume: 75 Issue: 10 Pages: 871-881
OCT 2007
Times Cited: 0
[Context Sensitive Links](#)
- ☐ 2. Title: [Frequency- and time-domain investigation of the dynamic properties of interlayer-exchange-coupled Ni81Fe19/Ru/Ni81Fe19 thin films](#)
Author(s): Belmeguenai M, Martin T, Woltersdorf G, et al.
Source: **PHYSICAL REVIEW B** Volume: 76 Issue: 10 Article Number: 104414
Times Cited: 0
[Context Sensitive Links](#)
- ☐ 3. Title: [Hot-electron transport and magnetic anisotropy in epitaxial spin valves](#)
Author(s): Heindl E, Vancea J, Woltersdorf G, et al.
Source: **PHYSICAL REVIEW B** Volume: 76 Issue: 10 Article Number: 104435
Times Cited: 0
[Context Sensitive Links](#)
- ☐ 4. Title: [Semiconductor spintronics](#)
Author(s): Fabian J, Matos-Abiague A, Ertler C, et al.
Source: **ACTA PHYSICA SLOVACA** Volume: 57 Issue: 4-5 Pages: 565-907
2007
Times Cited: 0
[Context Sensitive Links](#)



Establishing New Cooperations

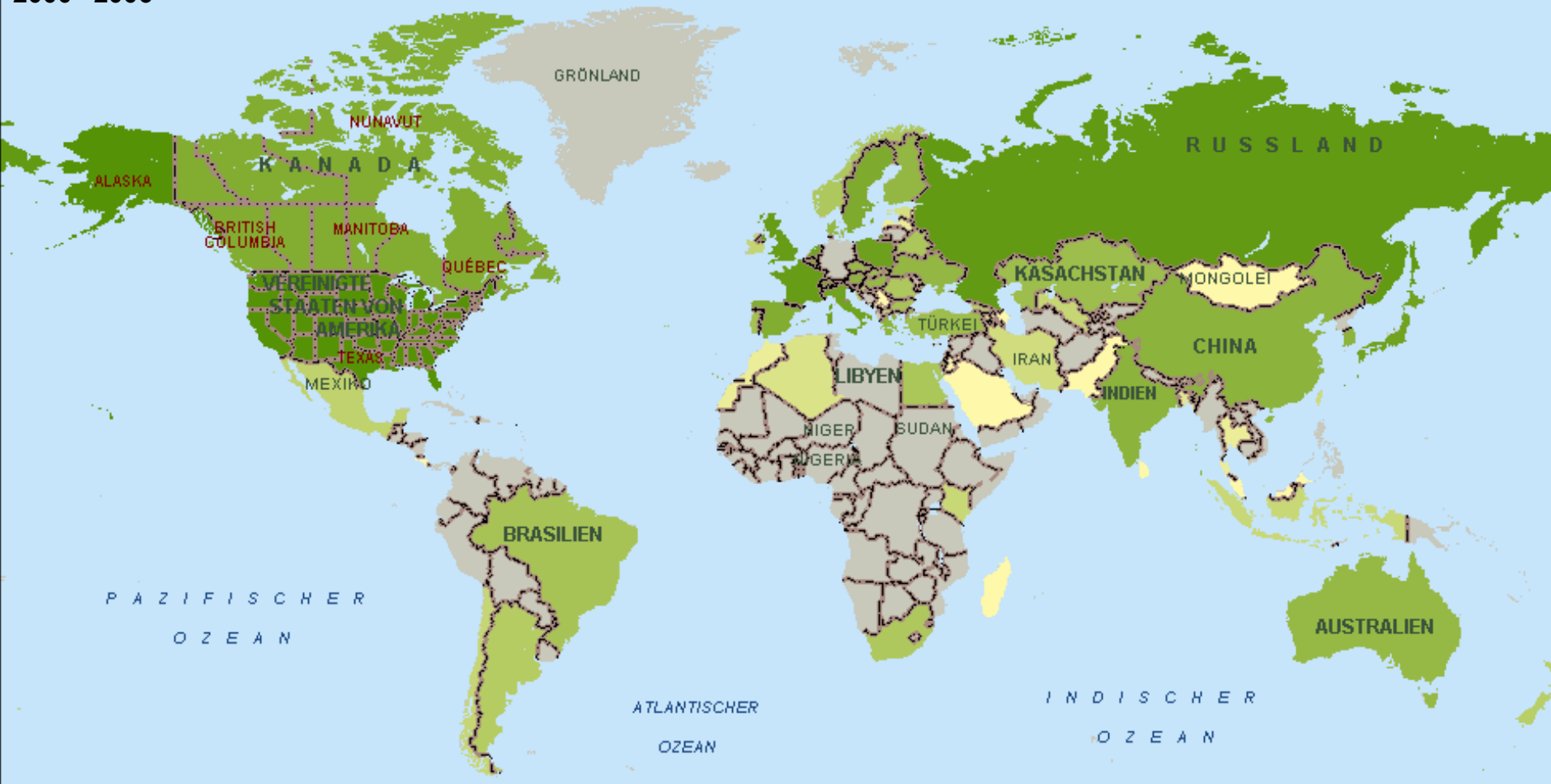
- Eickhoff SB, Stephan KE, Mohlberg H, Grefkes C, Fink GR, Amunts K, Zilles K (reprint author): *A new SPM toolbox for combining probabilistic cytoarchitectonic maps and functional imaging data*. Neuroimage 25(4), 1325-1335 (2005)
- as of today, cited by 90 publications
- among them are 2 publications by *Claus Lamm and Jean Decety, Department of Psychology and Center for Cognitive and Social Neuroscience, The University of Chicago*
- up to now, no cooperation with INB-3 from Julich

➔ potential cooperation?



Analysis of Existing Cooperations

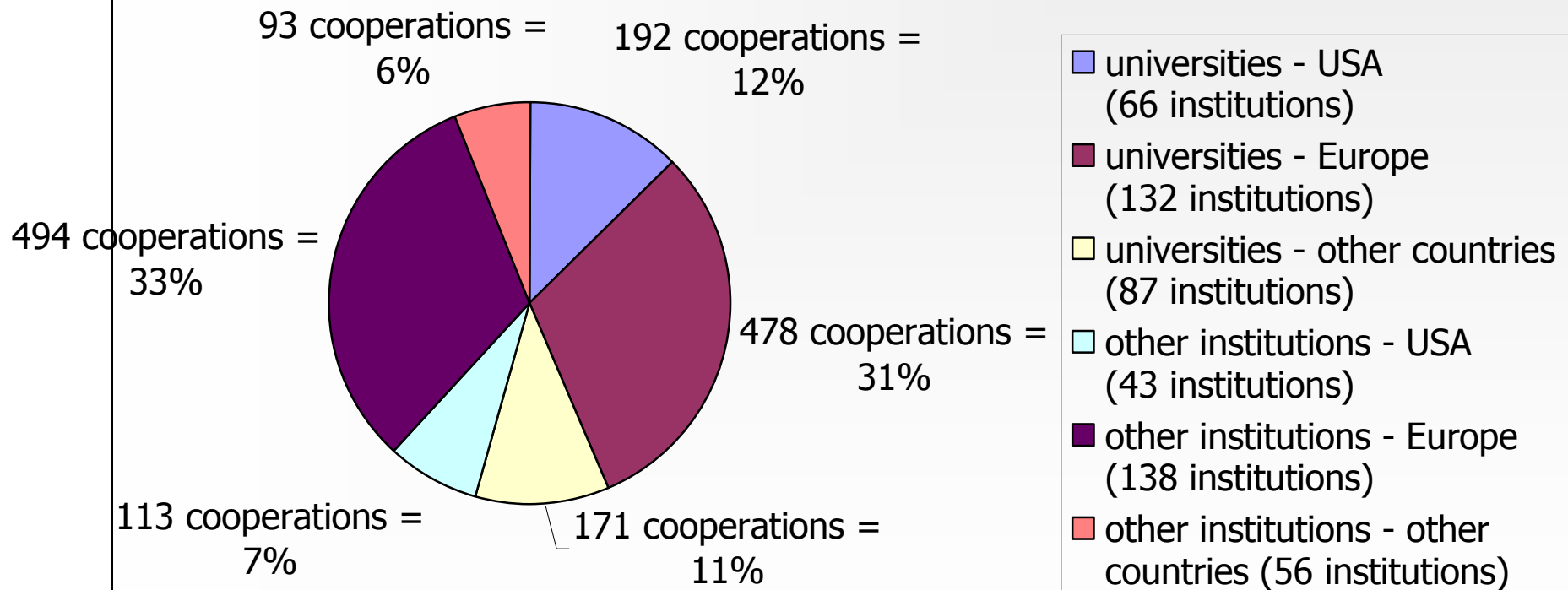
Kooperationspartner (Länder) des Forschungszentrums Jülich
2000 - 2006





Analysis of Existing Cooperations

Copublicatons between Research Centre Julich and foreign institutions 2006





Assistance for Policy Makers



PROJEKTTRÄGER FÜR DAS



Bundesministerium
für Bildung
und Forschung

Internationales Büro des BMBF (Hrsg.)

Bibliometric Analysis on the Scientific Output of India

*B. Mittermaier, D. Tunger, U. Burkard,
S. Ramowsky & H. Lexis*
Forschungszentrum Jülich

in Zusammenarbeit mit

G. Heinrichs
Internationales Büro des BMBF

Februar 2007



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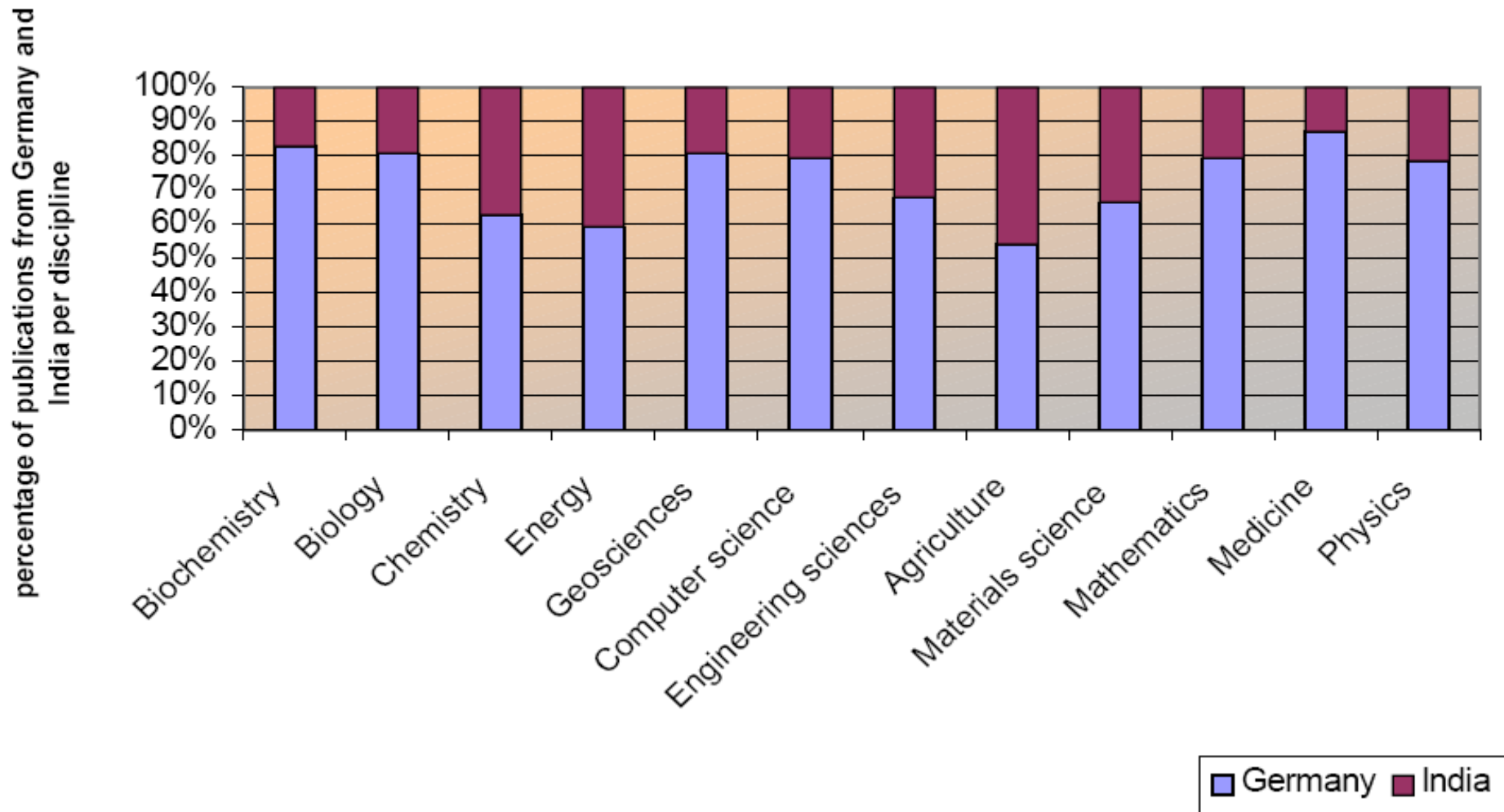
Februar 2007





Assistance for Policy Makers

Comparison of publication activities in Germany and India



b) Chemistry

Top publishers

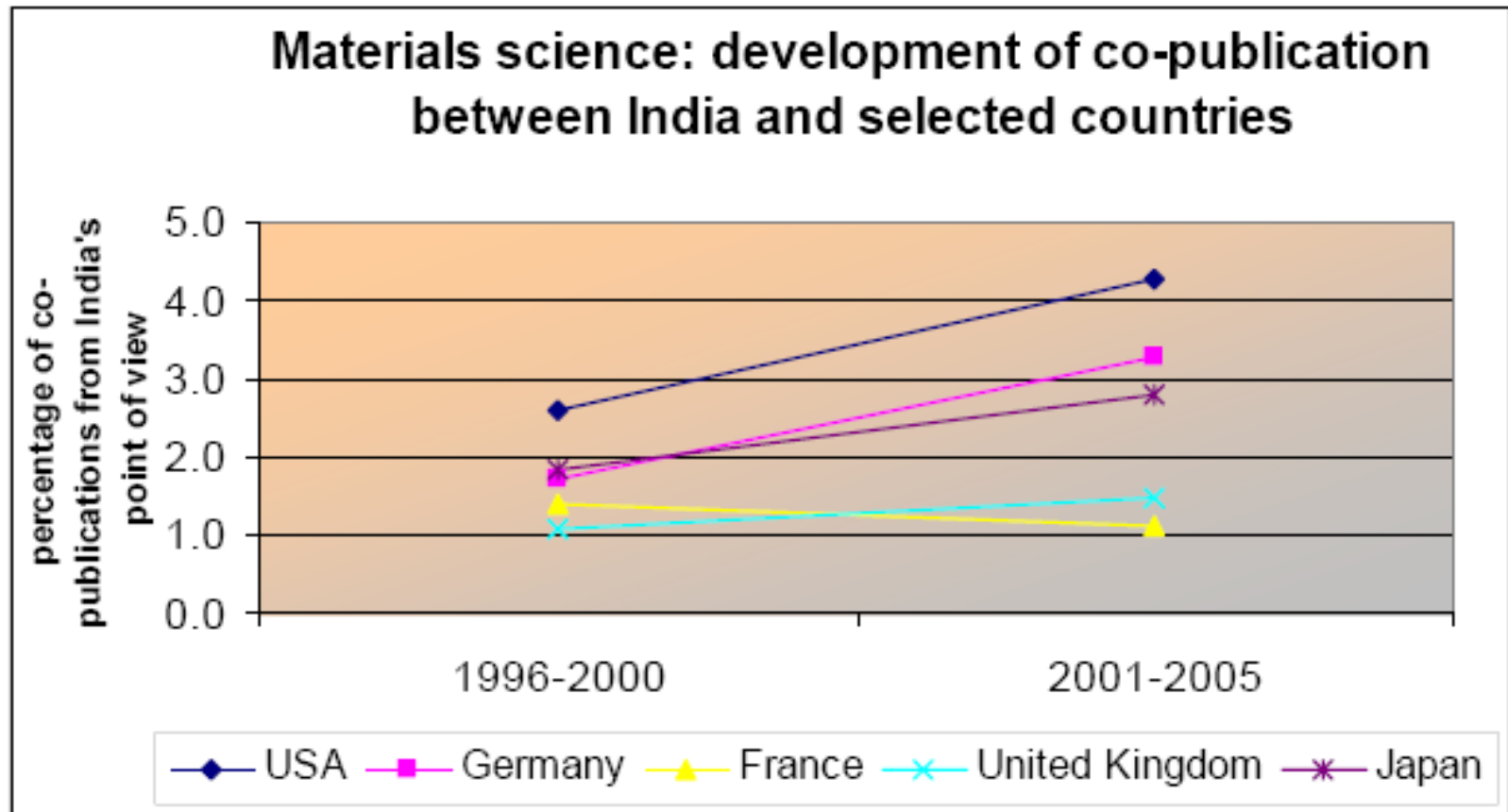
Institution	State/Union Territory	Number of articles
Indian Institute of Chemical Technology	Andhra Pradesh	1614
National Chemical Laboratory	Maharashtra	1425
Indian Institute of Science	Karnataka	1356
Bhabha Atomic Research Centre	Maharashtra	1173
Indian Institute of Technology Kanpur	Uttar Pradesh	772
Indian Institute of Technology Bombay	Maharashtra	735
Indian Institute of Technology Kharagpur	West Bengal	667
Indian Association for the Cultivation of Science	West Bengal	633
Central Drug Research Institute	Uttar Pradesh	581
Jadavpur University	West Bengal	568

Highest perception

Institution	State/Union Territory	Number of articles	Number of citations	Citation rate
Jawaharlal Nehru Centre for Advanced Scientific Research	Karnataka	363	3683	10.1
University of Hyderabad	Andhra Pradesh	374	3526	9.4
Indian Institute of Science	Karnataka	1356	8394	6.2
CSIR, Regional Research Laboratory	Kerala	326	2003	6.1
National Chemical Laboratory	Maharashtra	1425	8432	5.9
Indian Association for the Cultivation of Science	West Bengal	633	3459	5.5
Central Salt & Marine Chemicals Research Institute	Gujarat	197	1040	5.3
Indian Institute of Chemical Technology	Andhra Pradesh	1614	8509	5.3
Indian Institute of Technology	Maharashtra	735	3534	4.8
Indian Institute of Technology	Uttar Pradesh	772	3706	4.8

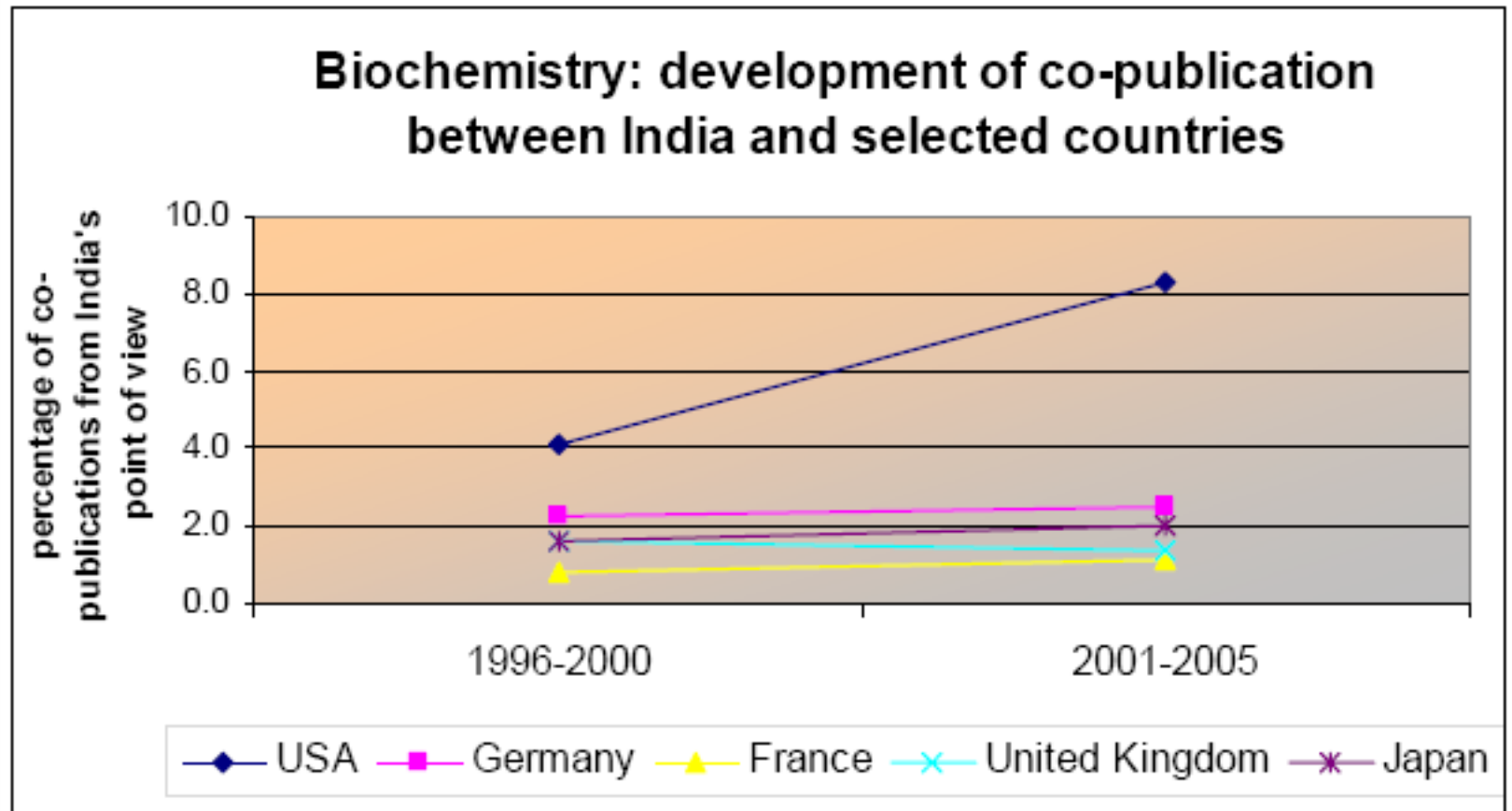


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Selecting the Right Journal

Journal	Publications	Citations	Average citation rate
SCIENCE	4	621	155
NATURE REVIEWS NEUROSCIENCE	3	455	152
EUROPEAN PHYSICAL JOURNAL C	8	293	37
PHYSICS LETTERS B	9	260	29
PHYSICS IN MEDICINE AND BIOLOGY	3	70	23
PHYSICAL REVIEW LETTERS	4	71	18
<i>NEUROIMAGE</i>	<i>117</i>	<i>1849</i>	<i>16</i>
JOURNAL OF APPLIED PHYSICS	3	44	15
PHYSICAL REVIEW E	7	58	8
JOURNAL OF PSYCHOPHYSIOLOGY	5	0	0
AMERICAN JOURNAL OF PHYSICAL ANTHROPOLOGY	4	0	0
JOURNAL OF HEPATOLOGY	4	0	0
KLINISCHE NEUROPHYSIOLOGIE	3	0	0

Research Centre Jülich, Institute of Neurosciences and Biophysics - Medicine



Cancellation of Journals

- less than 80 downloads p.a.? (→ publisher/host)
- no publication in the last two years? (→ WoS)



decision by subject librarians



Subject Analysis

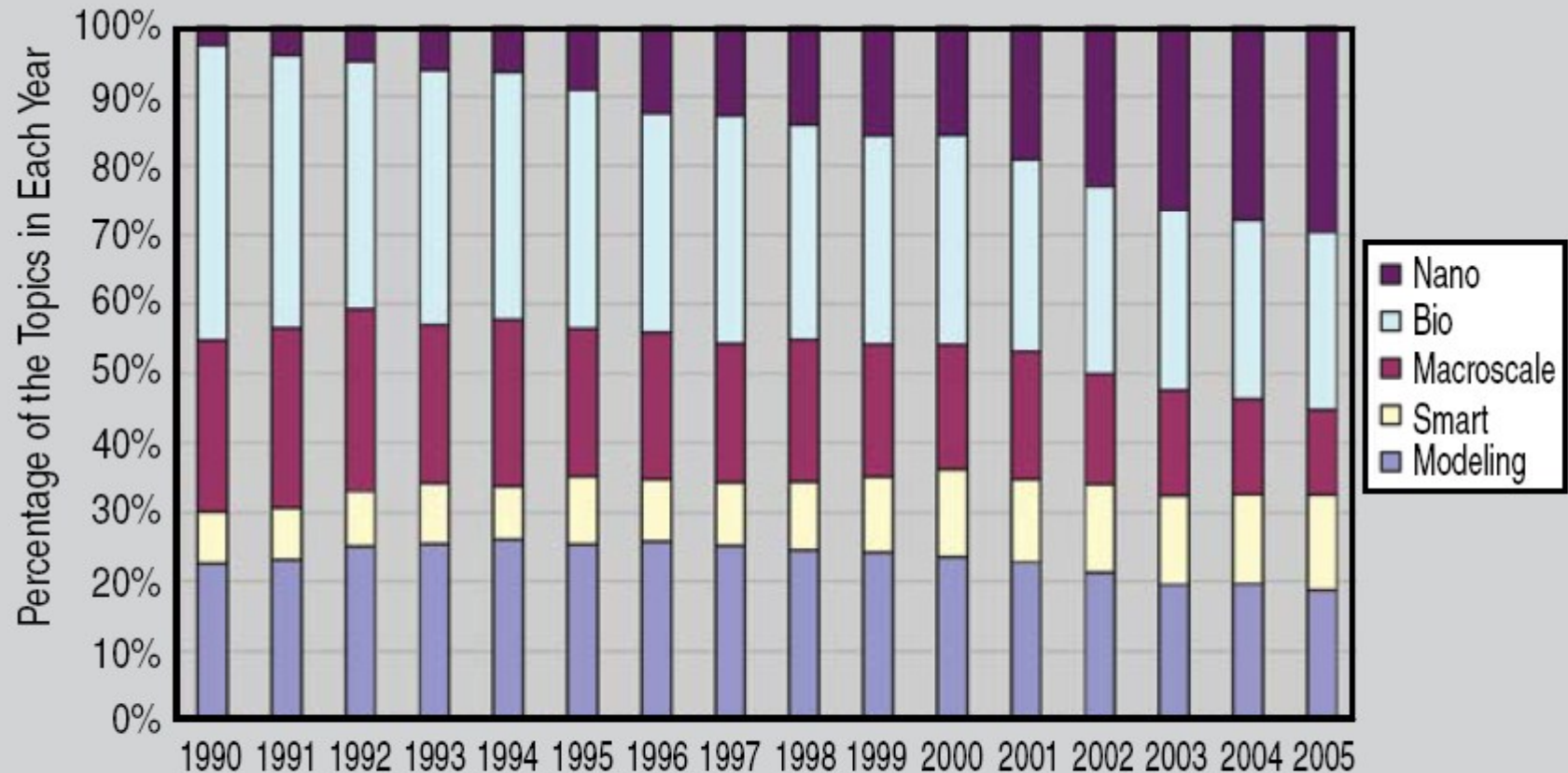


Figure A. A timeline of all SMART topics; displayed is the percentage of each topic on the total publication output of the five SMART Topics in each year

Gerd Schumacher, Dirk Tunger, Alan Smith, Stuart Preston and Brian Knott: Materials research in Europe: Mapping excellence and looking ahead (2007). JOM. The Journal of The Minerals, Metals & Materials Society 59(2), 75-77



Analyses of Individuals

- Number of publications, citations, and citation rates along with their development over time
- Hirsch index
- Impact factor of journals
- Co-workers and their characteristic data
- ...



Thank you!

Dr Bernhard Mittermaier
Central Library
Research Centre Jülich
52425 Jülich
Germany

Mail: b.mittermaier@fz-juelich.de

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